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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 United States Special Operations Command									DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 0400: Research, Development, Test & Evaluation, Defense-Wide BA 2: Applied Research				R-1 ITEM NOMENCLATURE PE 1160407BB: Special Operations Forces (SOF) Medical Technology Development/S275							
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	2.361	2.390	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
S200: Special Operations Forces (SOF) Medical Technology Development/S275	2.361	2.390	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Note This program element (PE) was subsumed under PE 1160402BB beginning in FY 2010. The congressional add in FY 2010 will be moved to PE 1160402BB via a DD Form 1415-3 reprogramming action.											
A. Mission Description and Budget Item Justification This program element provides studies, non-system exploratory advanced technology development, and evaluations. The focus is on medical technologies, centering on physiologic, psychologic, and ergonomic factors affecting the ability of SOF to perform their missions. Special operations requires unique approaches to combat casualty care, medical equipment, and other life support capabilities including life support for high altitude parachuting, combat swimming, and other SOF-unique missions. This program provides guidelines for the development of selection and conditioning criteria, thermal protection, decompression procedures, combat casualty procedures, and life support systems. The program supports the development and evaluation of biomedical enhancements for the unique requirements of all SOF in the conduct of their diverse missions.											

UNCLASSIFIED

R-1 Line Item #23

Page 1 of 5

UNCLASSIFIED

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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 2: <i>Applied Research</i>	R-1 ITEM NOMENCLATURE PE 1160407BB: <i>Special Operations Forces (SOF) Medical Technology Development/S275</i>
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B. Program Change Summary (\$ in Millions)

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	2.452	0.000	0.000	0.000	0.000
Current President's Budget	2.361	2.390	0.000	0.000	0.000
Total Adjustments	-0.091	2.390	0.000	0.000	0.000
• Congressional General Reductions		-0.010			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		2.400			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-0.091	0.000			

Congressional Add Details (\$ in Millions, and Includes General Reductions)

Project: S200: *Special Operations Forces (SOF) Medical Technology Development/S275*

Congressional Add: *Personalized Medicine Initiative*

Congressional Add Subtotals for Project: S200

Congressional Add Totals for all Projects

<u>FY 2009</u>	<u>FY 2010</u>
0.000	2.390
0.000	2.390
0.000	2.390

Change Summary Explanation

Funding:

FY09: Decrease of -\$0.091 million is due to Small Business Innovative Research transfer.

FY10: Net increase of \$2.390 million is due to a to Section 8097 congressional general reduction of (-\$.010 million) and a congressional add.
- Personalized Medicine Initiative (\$2.400 million)

FY11: None.

UNCLASSIFIED

R-1 Line Item #23

Page 2 of 5

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 United States Special Operations Command								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE				PROJECT			
0400: Research, Development, Test & Evaluation, Defense-Wide BA 2: Applied Research				PE 1160407BB: Special Operations Forces (SOF) Medical Technology Development/S275				S200: Special Operations Forces (SOF) Medical Technology Development/S275			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
S200: Special Operations Forces (SOF) Medical Technology Development/S275	2.361	2.390	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

Note

This program element (PE) was subsumed under PE 1160402BB beginning in FY 2010. The congressional add in FY 2010 will be moved to PE 1160402BB via a DD Form 1415-3 reprogramming action.

A. Mission Description and Budget Item Justification

This project provides studies, non-system exploratory advanced technology development and evaluations. The focus is on medical technologies, centering on physiologic, psychologic, and ergonomic factors affecting the ability of SOF to perform their missions. Special operations requires unique approaches to combat casualty care, medical equipment, and other life support capabilities including life support for high altitude parachuting, combat swimming, and other SOF unique missions. This project provides guidelines for the development of selection and conditioning criteria, thermal protection, decompression procedures, combat casualty procedures, and life support systems. The project supports the development and evaluation of biomedical enhancements for the unique requirements of all SOF in the conduct of their diverse missions. This effort is defined by the following seven areas of investigation:

- Combat casualty management will: (1) review the emergency medical equipment currently used in the SOF community and compare it to currently available civilian technology, and provide field testing of emergency medical equipment in the adverse environmental conditions encountered by SOF; (2) evaluate current tactical combat casualty care doctrine to ensure consideration of the wide variety of tactical scenarios encountered, and apply the latest concepts in casualty care to these circumstances; (3) apply lessons learned from recent combat operations to enhance medical capabilities; and (4) develop CD-ROM and internet compatible automated programs to provide the capability to perform medical interviews in multiple foreign languages and support SOF medical personnel information needs while operating in austere locations.
- Medical Informatics will study SOF operational medical lessons learned, initiate new studies to update SOF/Joint Medical Doctrine and procedures.
- Performance Enhancements will study flight proficiency and risk taking behavior during extended operations and adverse environments.
- Personalized Medicine Initiative. This project will develop and apply next-generation DNA sequencing technology to sequence the genomes of human subjects with a range of diseases and inherited disorders, in an effort to better understand the genetic basis of disease.

UNCLASSIFIED

R-1 Line Item #23

Page 3 of 5

UNCLASSIFIED

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Combat Casualty Care <i>FY 2009 Accomplishments:</i> FY09 Completed ongoing recombinant hemostatic agent’s studies for penetrating brain injury and SOCOM lab test. Initiated new studies to develop mission essential elements for enroute care.		0.479	0.000	0.000	0.000	0.000
Medical Informatics <i>FY 2009 Accomplishments:</i> FY09 Completed ongoing studies for SOF medical lessons learned and initiated new studies to update SOF/Joint Medical Doctrine and Procedures.		0.577	0.000	0.000	0.000	0.000
Performance Enhancements <i>FY 2009 Accomplishments:</i> FY09 Completed ongoing studies for comparison of flight proficiency and risk taking behavior in aviators given dextroamphetamine or modafinil during extended operations, the effects of exogenous erythropoietin on acute mountain sickness symptoms in humans and anti-clotting agents. Continued ongoing studies for biomarker and dynamic function tests for optimized health and performance, physical performance trainability limits on SOF standards used for recruitment and initial selection and metabolic markers to develop assays and optimize warfighter fitness. Initiated new studies for ergogenics, ergonomics, and operational performance in adverse environment studies.		1.305	0.000	0.000	0.000	0.000
Accomplishments/Planned Programs Subtotals		2.361	0.000	0.000	0.000	0.000
		FY 2009	FY 2010			
Congressional Add: Personalized Medicine Initiative		0.000	2.390			

UNCLASSIFIED

R-1 Line Item #23

Page 4 of 5

UNCLASSIFIED

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B. Accomplishments/Planned Program (\$ in Millions)		
	FY 2009	FY 2010
<i>FY 2010 Plans:</i> FY10 This initiative is a Congressional Add. This project will develop and apply next-generation DNA sequencing technology to sequence the genomes of human subjects with a range of diseases and inherited disorders, in an effort to better understand the genetic basis of disease.		
Congressional Adds Subtotals	0.000	2.390
C. Other Program Funding Summary (\$ in Millions) N/A		
D. Acquisition Strategy N/A		
E. Performance Metrics N/A		

UNCLASSIFIED

R-1 Line Item #23

Page 5 of 5